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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,563

02/08/2006

Thomas Heberlein

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HARNESS, DICKEY & PIERCE, P.L.C.

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RESTON, VA 20195

EXAMINER

CAVALLARI, DANIEL J

ART UNIT

PAPER NUMBER

2836

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,563	Applicant(s) HEBERLEIN, THOMAS	
	Examiner DANIEL CAVALLARI	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-25 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/8/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Examiner acknowledges the amendments submitted 2/8/2006. The amendments to claims and specification are accepted.

Information Disclosure Statement

The information disclosure statement(s) filed 2/8/2008 has been considered.

However, reference "US 2002/130557A1" to "Dickhoff" has not been considered because "US 2002/130557A1" is actually a publication to "Katayama". The Examiner notes that "US 2002/0130557A1" is a reference by "Dickhoff".

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "1" has been used to designate both "the protective device" and "the emergency stop device" (see specification page 2). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the interconnection of the edge evaluation unit and the pulse processing device (figure 4) with the circuit of figure 3. Figure 4 is a crucial component of applicant's invention yet it is not depicted in actual use with the overall system of figure 3. Furthermore, the two figures (figures 3 and 4) are disconnected in the sense that nowhere does applicant explain or depict in the drawings the interconnection of figure 4 with the system of figure 3. It is noted that figure 4 labels the input of the edge evaluation "on-pushbutton signal" and the output of the pulse processing device as "on to safety logic". One would expect to find a corresponding "pushbutton" and "safety logic" circuit in figure 3. Instead, figure 3 contains a plurality of different pushbuttons (12, 12', 33, 22, 22') and nowhere is "safety logic" labeled. It can only be assumed that the "safety logic" is either "emergency stop device" (also referenced as "protective device" (spec, page 2))

component 11 and/or component 21 or possibly a separate component as shown in figure 4.

Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

- Specification, page 2, “the protective device” and “emergency stop device” are designated as the same label.

Appropriate correction is required.

Claim Objections

Claim 9 is objected to because of the following informalities:

There is a lack of antecedent basis for the phrase "the first input". The claim will be read as best understood as "a first input"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 4-9, 11, 14-20, and 22-25 are rejected under 35 U.S.C. 102(a) as being anticipated by Clement et al. (US 2002/0175568)

In regard to claims 1, 4, 11, 14, and 23

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A protective device for the safety-related shutdown of an electrical unit (actuators of 78, figure 2), comprising:

A first input for receiving a switch-off signal (88, figure 2) a second input (read on by the particular input of line 53, figure 1) for receiving a switch-on signal in the form of a switch-on pulse (60, figure 1); an output for driving the electrical unit (output to actuators 78, figure 1); and a pulse processing device (78) setting the protective device (actuators of 78) to an activation state in which is switchable on (ie. switched on) when the switch-off signal is not applied, for a predetermined period of time from reception of the switch-on pulse (noting that the actuators are switched on when the “off signal” (ie. stop signal from 48) are not applied until an “off signal” from one of the switches is applied, see paragraphs 79-81).

In regard to Claims 5 and 15

Wherein the inputs and outputs include a plurality of channels (88, figure 3).

In regard to Claims 6 and 16

The protective device as claimed in claim 1 wherein at least one of the falling edge and both edges of the switch-on pulse are evaluated by the pulse processing device for setting the protective device to the activation (on) state (see paragraph 60, further noting the entire pulse is imputed into the pulse processing device and therefore “evaluated”).

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In regard to Claims 8 and 17

Wherein the predetermined period of time for the activation state corresponds to at least one of the activation time of the electric unit and a further protective device (noting the predetermined period of time for the activation state corresponds to when a further protective device (48, figure 1) is pressed).

In regard to Claims 9 and 18

A protective system having a plurality of protective device (18, 20, figure 1) connected in cascade fashion (noting 24 controls 18 and 20), a first input of a second of the plurality of protective devices being driven by the output of a first of the plurality of protective device (40) figure 1).

In regard to Claim 19

Wherein the switch-on signal makes all of the plurality of protective devices available (energized) simultaneously (see paragraph 81).

In regard to Claims 20, 22, 24, and 25

Wherein the electrical unit is a contactor (42, figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 10, 12, 13, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clement et al. in view of Lazzaro (US 2002/0195883).

In regard to Claims 2, 3, 12, 13, and 21

Clement et al. (hereinafter referred to as Clement) teaches the protective device as claimed in claim 1, wherein the switch-on signal originates from a rotary switch but further states that other switch configurations can be used (52, figure 1 and paragraphs 60 and 81).

Lazzaro teaches a latchable [wherein latchable is read on by producing a switch (on/off) signal] emergency stop circuit in which a push button start/stop switch is used (see paragraph 55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the push button style switch as taught by Lazzaro in place of the emergency switch of Clement. The motivation would have been to provide a switch well known and recognized and easy to use in the event of an emergency.

In regard to Claim 10

Clement teaches the protective device, as claimed in claim 9, wherein the inputs of the plurality of protective devices are connected to a common pushbutton [noting switch 52 commonly controls (ie. stops) all circuits] wherein the switch-on signal originates from a “rotary switch” but further states that other switch configurations can be used (52, figure 1 and paragraphs 60 and 81).

Lazzaro teaches a latchable [wherein latchable is read on by producing a switch (on/off) signal] emergency stop circuit in which a push button start/stop switch is used (see paragraph 55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the push button style switch as taught by Lazzaro in place of the emergency switch of Clement. The motivation would have been to provide a switch well known and recognized and easy to use in the event of an emergency.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regard to claim 7

Ehrlich et al. (US 6,825,579) teaches the use of a timer with a safety switching apparatus (see column 5, lines 1-10). However, prior art fails to teach wherein a pulse processing device includes the timing element which provides an acknowledgment common for maintaining the activation state (of the actuators) for a predetermined time after the switch-on pulse.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Pullmann et al. (US 2003/0011250)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Cavallari whose telephone number is 571-272-8541. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

/Daniel Cavallari/

May 17, 2008